



## SWARC NEWS

### Notes from K7RLH

Welcome to the December 2021 newsletter and the heart of the holiday season.

I hope you all enjoyed the club holiday event that was shared by the 19 attendees. We had plenty of delicious food and the holiday spirit was evident.

***I continue to encourage you to renew your club membership if you have not already done so. In addition, if you are an ARRL member, I thank you. If not, I encourage you to join as our club is required to maintain 51% ARRL membership to be an affiliated club and there's lots of useful info on their website that has 'members only' access. ARRL is our voice to the FCC and other government agencies regarding protection of frequency spectrums that we hams like to use.***

Hopefully, we will not have to return to 'Zooming' but that is beyond our control right now and we must follow all safety protocols and allow members to choose if they are comfortable meeting in person, and whether we should continue with meals. So, until we know more, let's keep on meeting and see what the 'science' tells us while always being sensitive to others concerns. I sincerely hope we can continue meeting in person as it allows all folks to have their say, which is not always as feasible when on Zoom.

Look for other info in the body of the newsletter. Merry Christmas and Happy New Year!

SWARC de K7RLH

## Notes from KB4NC

Greetings SWARC members!

What a way to wrap up a crazy year with our club Christmas Party! It was great to see some familiar faces and some new ones. We certainly had a variety of dishes and desserts to pick from.

We are going to wrap up the food trifecta in January with the club's traditional Chili Cookoff. I will get a list of the Chili Cooks who want to put their prize culinary specialty together and compete for bragging rights to the Best Chili in SWARC for 2022!

We will also have a presentation by yours truly on the Tempest Weather Station and all the features that make it probably the best home system to have.

I wish everyone and your families a very Merry Christmas and a Happy New Year!

73,  
Manny - KB4NC

## SWARC 1 December 2021 Meeting Minutes

The meeting was called to order around 6:15 pm by President Richard Hall, K7RLH. This was our Christmas holiday meal meeting so it started early with lots of very good and filling food and desserts. Our normal meeting times are at 7pm on the first Wednesday of every month in Building 2 on the Legion complex. Richard led us in a meal blessing.

We had good attendance with 19 persons present. Attendees included: Richard Hall (K7RLH), and wife Sharon; Bill Blomgren (KK4QDZ), Al Crawford (WA4TCJ), Steve Mowels (KA0GMY) and his lovely wife Miss Gloria, Mike Gaither (K4MWG), Gary Plante (KO4LQX), Brian Knox (KK4BK), Dave Yow (K4MSE), Dave Krum (NW3U) and his better half Penny, Manny Garcia, KB4NC, Dianne, KE4VNC, Velda, K4VJC, Mike, KD4MC, Chris, KC2HBO, Don, KN4OEY, and Paul, KN4NGI.

### **Financial Report:**

Christy provided a financial report after the meeting and noting that the club has \$1,800.20 in the bank as of 1 December. The club's balance reflects the \$50 sponsorship for Single-Op/In-State/phone low power award for NC QSO Party. She also reported two membership renewals during November.

### **New Business:**

This being a family-oriented holiday meeting there were only two 'agenda' items to be dealt with. See the 'Main Event' headline below.

Richard reminded the attendees that the Central Carolina VE Team offers monthly exam sessions. Exams are typically given on the first Saturday of each month, with some exceptions for holidays, at 10:00 am at American Legion Post 116, Bldg 2, 6400 Johnson Pond Rd., Fuquay-Varina, NC 27526. Examinees are encouraged to register ahead of time on the 'fivecountyhre.org web site, but walk-ins are accepted provided you have a valid email address and either have a FRN number from the FCC or a current ham radio license. It is suggested that you bring a copy of your current license if applicable.

### **Main Event:**

We had the drawing for our annual raffle; the winners were not from SWARC, but arrangements are being made to get the lucky winners their prizes. Chuck Hall (no relation), AE4CD, won the radio and Gaylord Barnes, KO4JSU, won the 2021 ARRL Handbook. Both of these items were donated so the club retained all of the monies as profit.

The other 'big' item, announced by 'Big Ugly' himself, KA0GMY, was the award of two 'co-hams of the year' for 2021. The awardees were KK4BK, Brian Knox, who

was recognized for leading the club for four years as both VP and President, especially during the challenging Zoom year caused by the COVID-19 virus. Look for a thank you from Brian below. The other awardee was your truly, K7RLH, recognized for leading the club as VP and President and for starting and continuing the local test group using the Legion facilities. I will add something to the end of Brian's message to add my thoughts and thank you to the award committee and the membership.

Richard concluded the meeting around 8:00 pm.

73

Richard Hall – K7RLH – Acting Scribe

## MEMBERSHIP

Just a reminder that it is that time again to pay membership dues.

\$30 for individuals and \$5 for each family member. These are not pro-rated unless an individual, as a previous member, is renewing midstream, etc.

You can bring a check or cash to the next meeting or mail them to the club PO box and Christy will let me know she has received them so I can update the list. If you mail them, give me a heads up so I can mark it as pending on the roster.

Makes checks payable to South Wake ARC.

If you are going to mail it, send it to South Wake ARC – PO Box 1565 – Fuquay Varina, NC 27526

I will be developing an online form so new members can fill out the application online and mail or bring a check to a meeting.

I will be reaching out to all members here soon to make sure I have the latest contact information, addresses, etc. so I can make sure the membership list reflects current information.

Gary Plante

KO4LQX

## THANK YOU

A sincere 'Thank You' for bestowing Co- "HAM of the Year" upon me. It has been an honor serving as your Vice President and Present over the last 4 years.

I tried to make the programs something that drove my interest to a topic. The pandemic made it impossible for the Club to meet at the Legion but Zoom attempted to fill the spot. The monthly meeting gave us the opportunity to get club business complete, while the Pre-Net Wednesday Zoom meetings gave everyone the chance to get together and "HAM IT UP".

Thank You for the honor.

de KK4BK

I echo Brian's comments regarding the honor bestowed and the monetary gift as well. During my time as VP, I too tried to provide programs somewhat stimulated by my own interests, but with the thought of sharing info that you otherwise might not come across. Since I belong to several radio clubs, I often get my inspiration from a program that I viewed or attended.

Thank you for allowing me to serve as your president; I am proud to represent the club and its activities regardless of any recognition, although it does feel good to know you are making an impact!

de K7RLH

# NET REPORT

SWARC Group-November 2021

We had three individuals who can be referred to as net check in champs; they are Bill, KK4QDZ, Al, WA3JJG, and Richard, K7RLH.

Notice that we are only showing folks who have checked in more than once? Why did we do that?! Because there were 27+ recorded check-ins that came just once.

See you on the net.

net date	Callsign count	Expr1000	Net Checkins
11/1/2021	11	KK4QDZ	20
11/2/2021	14	WA3JJG	19
11/3/2021	12	K7RLH	18
11/6/2021	16	WA4TCJ	16
11/7/2021	15	KB4NC	13
11/8/2021	1	WB4UFO	12
11/10/2021	21	KN4OEY	12
11/13/2021	13	KJ4QNW	12
11/14/2021	12	KM4IJK	12
11/15/2021	16	KO4LQX	11
11/16/2021	15	KO4FUD	9

11/17/2021	13	N4BNC	8
11/20/2021	14	N4BAJ	8
11/21/2021	19	KO4MSN	7
11/22/2021	16	KK4BK	6
11/23/2021	13	N4NCK	5
11/24/2021	12	KT4JR	5
11/27/2021	12	KJ4CVK	5
11/28/2021	14	N4MRW	5
11/29/2021	15	K4ADH	5
11/30/2021	17	KI4WAI	5
KD2DMK	2	KJ4WLG	4
K4HEW	2	KG4JOK	4
KE4QBW	2	K2HJX	4
KO4DHJ	2	KO4SAV	4
KO4IHM	2	KA0GMY	4
KI4RAN	2	KI4YII	3
N4SMB	2	K4WCA	3
		KM4GDU	3

There is no change to the net control schedule below.

- For the time being, until further notice, Kenny, KJ4CVK, has resumed the noontime nets
- Saturday and Sunday evenings will be called by KT4JR & K7RLH
- KB4NC will call Monday evenings
- KA0GMY will call Tuesday evenings (backup is K7RLH)
- KK4BK will call Wednesday evenings except on meeting nights
- KJ4CVK to pick up Thursday evenings if available (KO4LZZ has volunteered to call if Kenny is not available)
- Fridays will continue to be called by NC4MP
- And we need backups – JUST BECAUSE.

Please contact Richard Hall, K7RLH, if you are interested in calling one or more nets.



# Public Service

*Check the RARS web site often for Public Service opportunities.*

## **BOARD OF DIRECTORS**

### **President**

Richard Hall--K7RLH

### **Vice President**

Manny Garcia--KB4NC

### **Secretary**

Andy McDaniel – KN4JJU

### **Treasurer**

Christy Fernandini - KJ4AEO

### **Member-At-Large**

Al Crawford –  
WA4TCJ

### **Member-At-Large**

Bernie Jones – N4BAJ

### **Member-At-Large**

Mike Gaither –  
K4MWG

### **Member-At-Large**

Brian Knox--KK4BK

### **Membership Chair**

Gary Plante--KO4LQX

## **Appointed Positions**

### **NET MANAGER**

Kenny Souther-KJ4CVK

### **Special Events Director**

Gino Fernandini –KI4YXO

### **Public Service Director**

David Krum – NW3U

# SWARC Mission Statement

South Wake ARC's primary purpose is to further the Amateur Radio Service through programs, activities, and education, in order to promote the radio knowledge, fraternalism and individual operating efficiency of its members. Further, it shall be our purpose to support the welfare of our community through public service including radio communications for emergency situations and public events, and through providing information, training, and assistance to individuals or organizations with an interest in the Amateur Radio Service.

## LINKS (if you have other links you want added then send them to me)

### **PRN**

***A Wide Area Digital Amateur Radio Network*** [www.ncprn.net](http://www.ncprn.net)

***GigaParts*** [www.gigaparts.com](http://www.gigaparts.com)

***QRZ*** [www.qrz.com](http://www.qrz.com)

***Ham Radio Outlet HRO*** [www.hamradio.com](http://www.hamradio.com)

***Raleigh Amateur Radio Society RARS*** [www.rars.org](http://www.rars.org)

***Johnson Amateur Radio Society JARS*** [www.jars.net](http://www.jars.net)

***South Wake Amateur Radio Club SWARC*** [www.southwakearc.com](http://www.southwakearc.com)

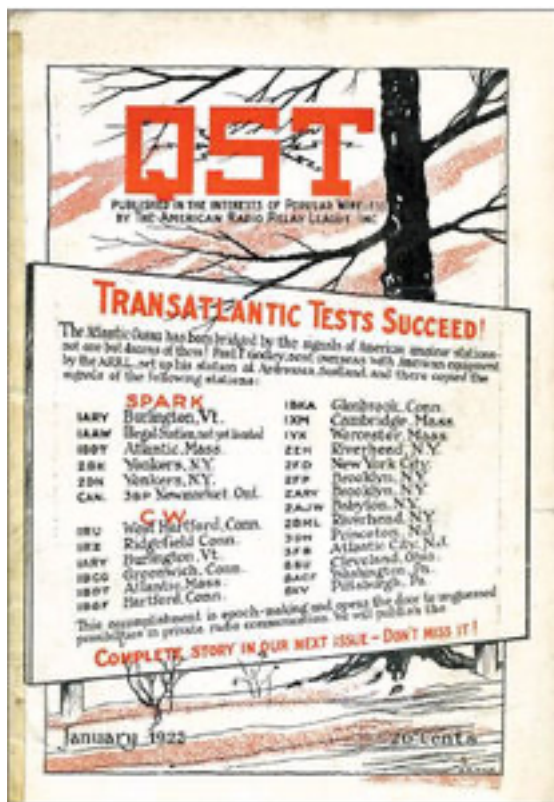
## ATTENTION

Our club is like other clubs, we have a mixture of memberships. We have everything from young members to those who are “Advanced Agers”. The point is - make sure to check up on our older members occasionally to see if they could use any help. Someday you may be in their exact situation. Also, when you are advised by email or net contact that someone has a need or illness/loss/etc., reach out to them and give them encouragement and help with their needs if you can.

## ARRL News

### Two 160-Meter Events in December Give Nod to 1921 Transatlantic Tests

In December, there will be two opportunities for 160-meter operators to fill the airwaves with activity and to test skills and stations on that band. The events take place a century after the transatlantic tests of the 1920s, which ushered in the dawn of international amateur radio communication.



This famous cover of the January 1922 issue of QST trumpets the success of the Second Transatlantic Test and lists the stations that Paul Godley, 2ZE, copied (or received) in Scotland.

pileup from their transmit frequency. They may also periodically ask for DX callers only. The exchange is call sign and signal report.

The annual [ARRL 160-Meter Contest](#) begins at 2200 UTC on Friday, December 3, and ends at 1559 UTC on Sunday, December 5. This 42-hour CW-only contest is most similar to the original transatlantic tests. This contest typically attracts a good crowd and presents a challenge to operator skill and station performance.

The Radio Society of Great Britain ([RSGB](#)) is planning to activate special call signs to commemorate the centenary of the tests. Stations from the UK and Crown Dependencies will use up to seven different call signs, each having a "6XX" suffix: G6XX, England; GD6XX, Isle of Man; GI6XX, Northern Ireland; GJ6XX, Jersey; GM6XX, Scotland; GU6XX, Guernsey, and GW6XX, Wales. In addition, listen for UK stations appending the suffix "/2ZE" to the station's call sign. Use of this commemorative suffix has been authorized for use December 1 - 26 by Ofcom, the UK's communications regulator.

On December 12 -- and not to be confused with the ARRL 160-Meter Contest -- ARRL and the RSGB will jointly sponsoring the [160-Meter Transatlantic Centenary QSO Party](#). This 6-hour event will run from 0200 to 0800 UTC. The event coincides with the 100th anniversary of the successful Second Transatlantic Tests. Participating stations will operate only on CW, trying to contact the two official call sign activations, W1AW and GB2ZE. The stations may listen for callers 1 kHz above their transmitting frequency, to shift the

During the QSO Party, ARRL will activate W1AW from Newington, Connecticut. RSGB will activate GB2ZE with help from a team of stations, including members of the GMDX Group of Scotland sharing the operating duties. GB2ZE commemorates the call sign of Paul Godley, 2ZE, who was sent by ARRL to the UK to lead the second Transatlantic Test in December 1921.

W1AW will be active for all 6 hours. Stations operating as GB2ZE will follow this schedule:

- 0200 UTC, from the commemorative station at Ardrossan, Scotland
- 0300 UTC, from GM3YTS
- 0400 UTC, from GM0GAV
- 0500 UTC, from MM0ZBH
- 0600 UTC, from MM0GPZ
- 0700 UTC, from GM4ZUK until 0800 UTC, or until the band closes at sunrise.

The GMDX Group will award a *quaich* -- a traditional Scottish drinking cup representing friendship -- to the first stations in North America and the UK to complete contacts with both W1AW and GB2ZE during the QSO Party. A commemorative certificate will be available for download. Participants will not have to submit logs. The official logs from W1AW and GB2ZE will be used to determine the winners and for certificates.

For additional details, visit <http://www.arrl.org/transatlantic> or [rsgb.org/main/activity/transatlantic-tests](http://rsgb.org/main/activity/transatlantic-tests).

## Dayton Hamvention Expects to be Live Event in 2022

[Dayton Hamvention](#)® organizers are planning to mount an in-person show in 2022, the first following 2 years of COVID-related cancellations. The event is set for May 20 - 22 at the Greene County Fairgrounds and Expo Center in Xenia, Ohio. Last January, Hamvention organizers from the



The cover of the December 2021 issue of QST commemorates the centenary of the Transatlantic Tests, which contributed to the rise of international amateur radio communications in the 1920s.



sponsoring Dayton Amateur Radio Association ([DARA](#)) announced they were calling off the 2021 event after considerable planning was already under way. The Hamvention



---

Executive Committee cited lagging COVID-19 vaccine distribution in the US and the emergence of a more communicable form of the virus.

Southgate Amateur Radio News quoted Hamvention General Chairman Rick Allnutt, WS8G, as saying that Hamvention committees "have been meeting, and volunteers are committed to making up for the time lost to pandemic cancellations." The Hamvention website is already accepting bookings from vendors and inside exhibitors, and individual visitors can already buy tickets, which Allnutt said, "are all printed and ready to go."

Nominations for the 2022 Hamvention Awards opened on November 1. Hamvention seeks "the best of the best" nominees for its Technical Achievement, Special Achievement, Amateur of the Year, and Club of the Year awards. Nominations close on February 15, 2022. Submit nomination forms via [email](#) or USPS to Hamvention Awards Committee, Box 964, Dayton, OH 45401-0964. The 2022 Dayton Hamvention is an [ARRL-sanctioned event](#). Read [an expanded version](#).

---

## ARRL Podcasts Schedule



The latest episode of the On the Air podcast (Episode 23) features an in-depth discussion of Q-signals, along with several on-the-air examples.

The latest edition of the Eclectic Tech podcast (Episode 48) features a conversation about the technical aspects of the 1921 Transatlantic Tests with Clark Burgard, N1BCG. We also chat about on-air activities surrounding the upcoming anniversary.



The On the Air and Eclectic Tech podcasts are sponsored by Icom. Both podcasts are available on iTunes (iOS) and Stitcher (Android) as well as on Blubrry -- [On the Air](#) | [Eclectic Tech](#).



## Fall ARRL Section Manager Election Results

The only contested seat for Section Manager (SM) in the fall election cycle was in Kansas, where incumbent Ron Cowan, KB0DTI, of La Cygne, came out on top in the two-person race. Cowan outpolled challenger Lloyd Colston, KC5FM, of Arkansas City, 260 to 225. Ballots were counted on November 23 at ARRL Headquarters. Cowan has served as Kansas Section Manager since 2003. His new 2-year term will begin on January 1, 2022.

- In Alabama, Roger Parsons, KK4UDU, of Mulga, will become the new Section Manager on January 1. Parsons was the only nominee for the position. He has been an Assistant Section Manager and a District Emergency Coordinator. Incumbent SM JVann Martin, W4JVM, who has served as the Alabama Section Manager since 2016, decided not to run for a new term.
- In Michigan, Les Butler, W8MSP, of Gregory, will become the new Section Manager of Michigan when the new year arrives. He was the only nominee to submit a petition by the nomination deadline. Butler will succeed incumbent Michigan Section Manager Jim Kvochick, K8JK, whose job will take him out of the state early next year. Kvochick has been Michigan SM since 2018.
- In Delaware, the Section Manager position remains open, and a re-solicitation for nominees will be issued this winter for an 18-month term beginning on July 1, 2022. No nominating petitions were submitted before the deadline in September. Incumbent Section Manager Mark Stillman, KA3JUU, is moving out of Delaware early next year and could not run for another term after serving as SM since 2020.



These incumbent Section Managers faced no opposition and were declared elected for new terms: David Stevens, KL7EB (Alaska); Mike Patterson, N6JGA (East Bay); Bill Mader, K8TE (New Mexico); John Kitchens, NS6X (Santa Barbara); David Thomas, KM4NYI (Tennessee), and Raymond Lajoie, AA1SE (Western Massachusetts).



Interim Maine SM Phil Duggan, N1EP.

An interim Section Manager (SM) has been appointed in Maine, effective on December 1, after incumbent SM Robert Gould, N1WJO, resigned for personal reasons. Gould had served since July 2020. ARRL Field Services Manager Mike Walters, W8ZY, appointed Phil Duggan, N1EP, of Milbridge as interim Section Manager to complete the current term, which ends on June 30, 2022. Duggan is a retired US Navy electronics technician chief and active in emergency communications. He served previously as Maine Section Emergency Coordinator. Duggan is active in promoting amateur radio, especially among youth.

Nominating petitions for the next Maine SM term of office are due at ARRL Headquarters no later than March 4, 2022. See the January 2022 issue of QST for the nomination announcement or the ARRL website for [further details](#).

## YOTA Month Continues to Expand into the Americas

December is [YOTA Month](#), celebrating and encouraging Youngsters/Youth On the Air. Amateur radio operators who are 25 years old and younger will be helping special event stations around the world throughout December in celebration of youth in amateur radio. YOTA Month stations will be on all bands and modes at various times.

In the US, the call signs will once again be K8Y, K8O, K8T, and K8A. Three new DXCC entities will be participating for the first time. Argentina will be active as LR1YOTA, Cuba as CO0YOTA, and Peru as OA0YOTA. Other countries may be added. Listen for these stations, as well as other call signs with YOTA suffixes.

Last year, 28 operators in the Americas participated in YOTA Month, and this year, Youth in the Americas anticipates an increased level of youth activity from South America. Last year, young hams around the world surpassed their goal of 100,000 contacts during YOTA Month, with a final tally of 137,000. Stations in the Americas logged 14,700 of those contacts.

Overlapping with YOTA Month is Round 3 of the YOTA Contest, December 30, 2021, 1200 - 2359 UTC.

More information about YOTA Month is available on the [Youth on the Air](#) website, which is sponsored by Icom America.

[Tambien disponible en Español.](#)

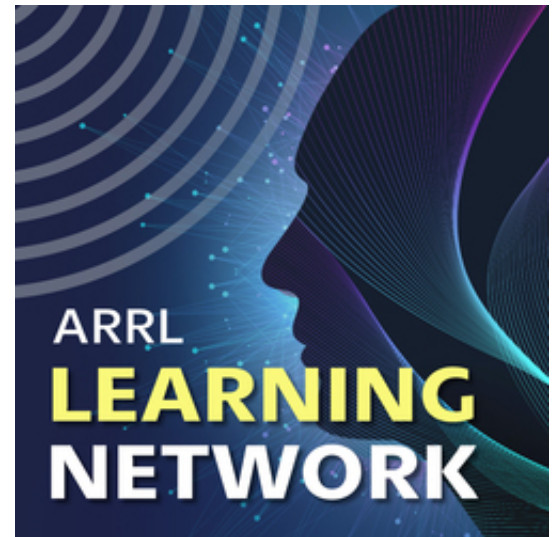
## ARRL Learning Network Webinars

Visit the [ARRL Learning Network](#) (a members-only benefit) to register, check on upcoming webinars, and to view previously recorded sessions.

**More webinars are coming soon!**

ARRL members may register for upcoming presentations and view previously recorded [Learning Network](#) webinars. ARRL-affiliated radio clubs may also use the recordings as presentations for club meetings, mentoring new and current hams, and discussing amateur radio topics.

The ARRL Learning Network schedule is subject to change.



## ARRL Author, *QST* Technical Editor Joel Hallas, W1ZR, SK

Retired *QST* Technical Editor Joel R. Hallas, W1ZR, of Westport, Connecticut, died on November 25. An ARRL member, he was 79. Hallas retired in 2013 but remained active as a contributing editor, handling the popular "The Doctor is In" column in *QST* and the podcast of the same name. He had been a radio amateur since 1955.

"Joel was not only brilliant, he shared that brilliance with the ham radio community in a way that taught innumerable hams things they needed to know in order to experience success and enjoyment," said ARRL





Publications and Editorial Department Manager Becky Schoenfeld, W1BXY. "He was a fine mind, a generous mentor and colleague, and a consummate gentleman. He will be missed."

Retired ARRL Publications Manager Steve Ford, WB8IMY, recalled Hallas as "an iconic figure in amateur radio media as a prolific author of *QST* articles and ARRL books, and even in the audio podcast community. I greatly enjoyed being Joel's sidekick for the popular 'Doctor is In' podcast. He had a wry sense of humor both on and off the microphone and a remarkably stoic attitude toward the illness that would eventually claim his life."

Hallas authored six books about communications technology, published by ARRL. His titles include *Basic Radio*; *Basic Antennas*; *The ARRL Guide to Antenna Tuners*; *Hamspeak*; *The Care and Feeding of Transmission Lines*; *Understanding Your Antenna Analyzer*, and *The Radio Amateur's Workshop*.

Hallas earned his bachelor's in electrical engineering from the University of Connecticut and an MSEE from Northeastern University. He previously had worked for Raytheon as a radar systems engineer and for GTE as a nuclear weapons effects (electromagnetic pulse) analyst and as a satellite

and terrestrial communications systems engineer, as well as for IBM and AT&T. He also taught at the college level.

He enjoyed sailing, as described in the July 2009 issue of *QST*. He and his 24-foot sloop *Windfall* -- fully equipped with a ham station that used the insulated backstay as an HF antenna -- graced the front cover.

Survivors include his wife of 58 years, Nancy, W1NCY.

## Past ARRL Rocky Mountain Division Director Claude Maer, W0IC, SK

Past ARRL Rocky Mountain Division Director Claude Maer, Jr, W0IC, of Denver, Colorado, died on November 16. An ARRL member, he was 102.

Maer grew up in Fort Worth, Texas, and attended Rice University in Houston, graduating in 1940 with distinction and enlisting in the US Army Air Corps (USAAC) during World War II. Maer served at various postings, including Lowry Air Force Base in Denver, as well as in Azores (Portugal), where he worked in communications and attained the rank of captain.

Maer [told](#) a Veterans History Project interviewer several years ago that his eventual route to military service really began when he got his ham radio license at the age of 12 in 1932. As a result, he was invited to attend Texas Army National Guard summer camp.

Maer served as the ARRL Rocky Mountain Division Vice Director for only 1 month before then-Rocky Mountain Division Director Franklin Matejka, W0DD (SK), announced his resignation to take a job overseas. Maer acceded to Director and served in that leadership position until 1960. Read [an expanded version](#).







**HAM RADIO DELUXE SOFTWARE**  
*The Radio Amateur's Best Asset*  
*www.HamRadioDeluxe.com*

**CLICK HERE FOR 20% OFF**

## The K7RA Solar Update

Tad Cook, K7RA, Seattle, reports: Solar activity was up this week. Average daily sunspot number increased from 26.9 to 46.1, and average daily solar flux was up 10.8 points to 90.9. Geomagnetic indicators were a little higher. Average daily planetary A index increased from 7.9 to 8.7, and average daily middle latitude A index from 5.4 to 6.3.



Two new sunspot groups emerged on November 26, another on November 28, and two more on November 30.

On December 1, [Spaceweather.com](http://Spaceweather.com) announced a geomagnetic storm watch: "Minor geomagnetic storms are possible on December 3 when a CME might sideswipe Earth's magnetic field. The storm cloud was hurled into space on November 29 by an erupting filament of magnetism in the sun's southern hemisphere. According to NOAA computer models, the bulk of the CME should sail south of our planet with a near miss [or] just as likely as a glancing blow."

Predicted solar flux for the next month has flux values peaking at 94 on December 27 - 28. The forecast sees values of 86 and 84 on December 2 - 3; 80 on December 4 - 5; 78 on December 6 - 7; 76 and 78 on December 8 - 9; 82 on December 10 - 12; 80 on December 13 - 14; 85 on December 15 - 21; 82 and 80 on December 22 - 23; 78 on December 24 - 25; 92 on December

26; 94 on December 27 - 28; 88 on December 29 - January 1; 85, 82, and 80 on January 2 - 4, and 82 on January 5 - 8.

Predicted planetary A index is 10, 16, 12, and 8 on December 2 - 5; 12, 10, and 8 on December 6 - 8; 5 on December 9 - 11; 8, 12, and 10 on December 12 - 14; 5 on December 15 - 16; 8 and 10 on December 17 - 18; 5 on December 19 - 25; 8 on December 26; 5 on December 27 - 29; 10 on December 30 - 31; 8 on January 1, and 5 on January 2 - 7.

Robert Marston, AA6XE, offered these observations:

"We now stand at exactly 2 years since the Solar Cycle 24/25 minimum was recorded, and the most notable attribute of Solar Cycle 25 is its slow climb out. We have seen bursts of activity from the sun, where numerous active regions pop up with only a handful actually developing into numbered sunspot groups. The bulk of new regions that form quickly decay away."

There will be more from AA6XE in Friday's report and bulletin.

Sunspot numbers for November 25 - December 1 were 20, 52, 53, 53, 47, 61, and 37, with a mean of 46.1. The 10.7-centimeter flux was 93.6, 92.3, 91.8, 92.2, 89.8, 90, and 86.4, with a mean of 90.9. Estimated planetary A indices were 5, 4, 5, 9, 9, 11, and 18, with a mean of 8.7. Middle latitude A index was 3, 3, 3, 7, 6, 8, and 14, with a mean of 6.3.

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

---

## Just Ahead in Radiosport

- **December 11 - 12 -- [ARRL 10-Meter Contest \(CW, phone\)](#)**
- **December 12 -- [160-Meter Transatlantic Centenary QSO Party\(CW\)](#)**

---

## Upcoming Section, State, and Division Conventions

- December 10 - 11 -- [ARRL West Central Florida Section Convention](#) (Tampa Bay Hamfest), Plant City, Florida
- January 22, 2022 [ARRL Midwest Division Convention](#)(Winterfest), Collinsville, Illinois
- January 28 - 29, 2022 -- [ARRL Delta Division Convention](#) (Capital City Hamfest 2022), Jackson, Mississippi.
- February 10 - 13, 2022 -- [2022 ARRL National Convention](#) at Orlando HamCation®, Orlando, Florida
- February 18 - 19, 2022 [ARRL Southwestern Division Convention](#)(Yuma Hamfest), Yuma, Arizona

Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

---

### ARRL -- Your One-Stop Resource for Amateur Radio News and Information

- **[Join or Renew Today!](#)** Eligible US-based members can elect to receive [QST](#) or [On the Air](#) magazine in print when they join ARRL or when they renew their membership. All members can access digital editions of all four ARRL magazines: [QST](#), [On the Air](#), [QEX](#), and [NCJ](#).
- Listen to [ARRL Audio News](#), available every Friday.
- *The ARRL Letter* is available in an accessible format, posted weekly to the [Blind-hams Groups.io](#) email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.

#### Subscribe to...

- [NCJ -- National Contest Journal](#). Published bimonthly, features articles by top contesters, letters, hints, statistics, scores, NA Sprint, and QSO parties.
- [QEX -- A Forum for Communications Experimenters](#). Published bimonthly, features technical articles, construction projects, columns, and other items of interest to radio amateurs and communications professionals.

#### Free of charge to ARRL members...

- [Subscribe](#) to the *ARES Letter* (monthly public service and emergency communications news), the *ARRL Contest Update* (biweekly contest newsletter), Division and Section news alerts and much more!
  - Find ARRL on [Facebook!](#) Follow us on [Twitter](#) and [Instagram!](#)
-

The ARRL Letter is published Thursdays, 48 times each year. ARRL members may subscribe at no cost or unsubscribe by editing their Member Data Page as described at <http://www.arrl.org/arrlletter/>.

Copyright © 2021 American Radio Relay League, Incorporated. Use and distribution of this publication, or any portion thereof, is permitted for non-commercial or educational purposes, with attribution. All other purposes require written permission.

**ARRL**, The National Association for Amateur Radio®  
225 Main Street, Newington CT, 06111-1400 USA  
860-594-0200

**www.arrl.org**